



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/280,518	04/05/99	FUJIWARA	K 32739M008

MM91/0329
BEVERIDGE DEGRANDI WEILACHER & YOUNG
SUITE 800 1850 M STREET N W
WASHINGTON DC 20036

EXAMINER	
YUTH, H	
ART UNIT	PAPER NUMBER

2861

DATE MAILED: 03/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/280,518	Applicant(s) FUJIWARA, KENSUKE	
	Examiner Hean Yuth	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 14) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 17) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 15) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 18) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 16) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 19) <input type="checkbox"/> Other: _____ |

Art Unit: 2861

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-2, 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, and 2 are vague and unclear. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Request rewriting claim 1 (from line 7) and claim 2 (from line 10). Specifically, the examiner is not clear in what way "coarsely dividing a predetermined laser intensity" differs from "finely dividing the predetermined laser intensity". The examiner is not clear if the applicant intends to teach a set of laser intensities being broken down into smaller intensities. It is furthermore not clear how the predetermined laser intensity is being "finely divided". The disclosure "in the vicinity of a laser intensity corresponding to a potential which is a nearest to a predetermined set potential out of the potentials detected at the coarse-division potential detecting step"

Art Unit: 2861

wants to say. First of all, the examiner is not clear what "a nearest" is referenced to. The examiner is confused as to how this disclosure relates to the teaching of the fine-division potential detecting step. It is not clear if the photoreceptor surface is exposed to the finer laser intensities or to the coarse intensities.

Claim 5, lines 3-5 "the predetermined laser intensity is set to a value which is considered to be greater than a suitable maximum intensity" is vague and unclear. The examiner request clarification as to what is considered to be greater than a suitable maximum intensity.

The remaining dependent claims are also rejected based upon the rejected independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikui (US 5966558) in view of Koyama et al (US 5071723).

Art Unit: 2861

In regard to :

Claims 1-4:

Kikui discloses an image forming apparatus having a control of exposure and method of adjusting a maximum intensity of a laser exposure mechanism for irradiating laser light to a surface of a photoreceptor to which a uniform potential is being given by a corona discharger, the method comprising :

- a potential detecting step of:
 - (i) exposing photoreceptor surface portions (figure 2, # 1a) to laser lights of a plurality of laser intensities from an exposure device (figure 2, # 11) by dividing a predetermined intensity (column 9, lines 10-35).
 - (ii) detecting potentials of photoreceptor surface portions (figure 1, # C: applied voltage correction means) exposed to the laser lights of the plurality of laser intensities (figure 1, # E: amount of light correction means, column 7, lines 43-48).

However, Kikui does not disclose a fine-division potential detecting step of:

- (i) further finely dividing, in the vicinity of laser intensity corresponding to a potential which is nearest to a predetermined

Art Unit: 2861

set potential out of the potentials detected at the coarse-division potential detecting step, the predetermined laser intensity to set a plurality of laser intensities,

- (ii) exposing photoreceptor surface portions to laser lights of the plurality of laser intensities thus set, and
- (iii) detecting potentials of the photoreceptor surface portions exposed to the laser lights of the plurality of laser intensities; and
- a step of (i) repeating the fine-division potential detecting step until there is obtained potential equal to substantially equal to the predetermined set potential, and (ii) setting, as the maximum intensity, the laser intensity corresponding to the potential thus obtained.
- the second potential detecting step is repeated until there is obtained potential equal to or substantial equal to the predetermined set potential.
- the laser intensities set at first and second potential detecting steps have values selected from a plurality of laser intensities obtained by dividing the predetermined laser intensity by a predetermined number.

Art Unit: 2861

Meanwhile, Koyama et al disclose a test by sending a laser light onto recording drum (figure 2) to find out at what voltage range of the residual voltage on the surface of the recording drum that produce of a quality picture at a predetermined of dark potential (column 14, lines 18-56). Koyama et al do a plurality of fine adjustments on laser output to have the exposed potential on the surface portion of the photoreceptor varied with a fine increment until the image with good quality is obtained. The various measurement data for examples 1-5 are shown in Table 2. The adjustment of laser output is repeated with further fine increment for each predetermined value of the dark potential and fine incremental changes of the residual potential of the surface portion of the drum are recorded (test results are in table 3-5 for examples 6-14).

Therefore, it would obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Koyama et al for having the method of laser intensity adjustment means by measuring the residual potential with a very fine adjustment the laser output intensity incorporated to the method of Kikui for the purpose of having a stable and high quality image.

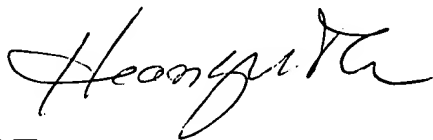
Claim 5:

Kikui in view of Koyama et al discloses most claimed features except the predetermined laser intensity is set to a value which is considered to be greater

Art Unit: 2861

than a suitable maximum intensity. It would have been obvious to one at the time the invention was made to set the predetermined laser intensity to a value which is considered to be greater than a suitable maximum intensity, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F 2nd 272, 205 USPQ 215 (CCPA 1980)

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hean Yuth whose telephone number is 703-306-5859. The examiner can normally be reached on 7:30am-4pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 703-308-0750. The fax number for the organization where this application or proceeding is assigned is 703-308-5841 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



HYT
March 23, 2000



N. Le
Supervisory Patent Examiner
Technology Center 2800